Comments on the proposed precedence of *Bolboceras* Kirby, 1819 (July) (Insecta, Coleoptera) over *Odonteus* Samouelle, 1819 (June) (Case 3097; see BZN 59: 246–248. 280–281; 60: 303–311)

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I support the application to use *Bolboceras* Kirby, 1819 (July) instead of *Odonteus* Samouelle 1819 (June) because of prevailing usage of the name *Bolboceras*. The name *Odonteus* has not been used since it was first proposed except by Krell in 1990, who suggested that *Odonteus* should be used since it had priority. To do so, however, would not only destabilize the nomenclature for the often cited genus name *Bolboceras*, but it would also decrease the flow of information that is normally associated with the name *Bolboceras*. Moreover, *Bolboceras* is also the type genus for the tribe BOLBOCERATINI and subfamily BOLBOCERATINAE. It would be confusing to use *Odonteus* instead when referring to the type genus of the family-group names. The second volume of 'American Beetles', published in 2002, will be the standard for North American Coleoptera classification for the next several decades, and *Bolboceras* is used in this work (with reference to the current application to the Commission).

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Comments by Krell et al. (BZN 60: 303–311) on the proposed precedence of *Bolboceras* Kirby over *Odonteus* Samouelle clearly demonstrate that three names are currently being used for one taxon, thus creating confusion within the literature. In our proposal (BZN 59: 246–248), we seek stability and universality in nomenclature. Krell et al. provide a substantial list of literature that references the names *Bolboceras* Kirby, *Odonteus* auctorum, or *Odontaeus* Dejean for the same taxon. In our proposal, we made the case that preservation of the name *Bolboceras* would lend the greatest nomenclatural stability based on prevailing usage. Worldwide, the name *Bolboceras* has been used extensively in the literature for over 180 years (e.g. Klug, 1845, pp. 36–56; Lacordaire, 1856, p. 142; Boucomont, 1912, pp. 7–14; Curtis, 1829, p. 259; Schaeffer, 1906, pp. 249, 253; Paulian, 1959, p. 44; Benasso, 1971, p. 133; Nikolaev, 1987, pp. 27–28; Barbero & Cavallo, 1999, p. 70). The name *Odonteus* was first brought to the attention of taxonomists by Krikken (1978). Krell (1990) subsequently synonymized *Bolboceras* under *Odonteus*. Krell (1990) proposed that the Principle of Priority be implemented, and that the name *Odonteus* should be used instead

of *Bolboceras*. Based on Krikken (1978), a few authors in Europe implemented use of *Odonteus* prior to its formal synonymy (Nikolaev, 1980; Jessop, 1986; Shirt, 1986).

Although Krell et al. provide a long list of literature to support their opinion, the overwhelming majority of this literature cannot be taken into account for two reasons: (1) the definition of prevailing usage according to Article 23.9.6 and (2) the status of actions of the Commission according to Articles 80 and 82.1. As stated in Article 23.9.6, the mere listing of the name in an index, abstracting publication, nomenclator, or list of names must not be taken into account in determining prevailing usage. Thus, most references provided by Krell et al. must be eliminated from their argument (e.g. Gürlich et al., 1995; Alexandrovitch et al., 1996; Hansen, 1996; López-Colón et al., 1996; Rössner, 1996; Telnov et al., 1997). In addition, when a case is under consideration by the Commission, the prevailing usage (Bolboceras) is to be maintained until the ruling of the Commission is published (Articles 80 and 82.1). Based on these Articles and the Case acknowledgement date (December 1998, BZN 55: 205), several references provided by Krell et al. must be eliminated from their argument because they postdate the Case (e.g. Nádai & Merkl, 1999; Martín-Piera & López-Colón, 2000; Rheinheimer, 2000; Carpaneto et al., 2001; Geiser, 2001; Jaszay, 2001; Krell, 2001; Lo Cascio, 2001; Ballerio, 2002; Frank & Konzelmann, 2002; Schaefer, 2002).

Krell et al. argue that the name Odontaeus Dejean is not a separate generic name but is a subsequent incorrect spelling of Odonteus Samouelle. The name Odontaeus (with or without the correct author attributed) further confounds nomenclatural stability. The name (with or without the correct author attributed) often appears in the literature (e.g. Boucomont, 1902; Wallis, 1928; Paulian & Baraud, 1982; Zunino, 1984; Baraud, 1992; Bunalski, 1999). Krell (1990) stated that Odonteus should be given priority over Bolboceras because of the orthographical similarity in spelling of Odonteus and Odontaeus, thus easing the transition to a new generic name. However, these names are not a reflection of a subsequent incorrect spelling for two reasons. First, Samouelle (1819) attributed Odonteus to Köppe, whereas Dejean (1821) attributed Odontaeus to Megerle. If these names were the same, then the authors would have attributed the name to the same individual. Second, Samouelle included only Scarabaeus mobilicornis Fabricius in his description, whereas Dejean included several previously described species as well as Scarabaeus mobilicornis Fabricius. The inclusion by Dejean of many previously described species shows that the concepts for Odonteus Samouelle and Odontaeus Dejean were different.

Usage of *Odonteus* Samouelle (or other authors), 1819 causes further nomenclatural confusion due to its homonym, *Odonteus* Agassiz, 1838. The name *Odonteus* Agassiz was in prevailing usage (e.g. Blot, 1988) until Krell (1991) noted that *Odonteus* Samouelle had nomenclatural priority. Based on the Principles of Priority and Homonymy, Krell (1991) proposed the replacement name *Odonteobolca* Krell, 1991 for *Odonteus* Agassiz. Confusion with these homonyms further adds to nomenclatural instability that would result from precedence of *Odonteus* Samouelle over *Bolboceras* Kirby as proposed by Krell et al.

Krell et al. suggest that the type species designation for *Bolboceras* Kirby is unequivocal. Their proposal to the Commission to designate *Scarabaeus quadridens* Fabricius, 1781 as the type species for the genus would create a junior synonym (Indobolbus Nikolajev, 1979) and would further disturb nomenclatural stability. Contrary to the opinion of Krell et al., Kirby did not declare 'explicitly that he used exclusively *B. quadridens* to describe the genus'. Kirby (1821) stated that 'details of *Bolboceras* were taken from *B. quadridens*' in reference, we think, to the detailed drawings of the mouthparts of *B. quadridens* that accompany the dorsal habitus drawing of *Bolboceras australasiae* Kirby. The image that accompanies Kirby's description shows a dorsal habitus of *B. australasiae* with the mouthparts of both *B. australasiae* and *B. quadridens* surrounding the image. Thus, Kirby's statement does not unequivocally establish the type species for *Bolboceras*, and there is ample ambiguity regarding Kirby's 'intention' (as Krell et al. assert) that *Scarabaeus quadridens* Fabricius, 1781 is the type for the genus. Curtis (1829, p. 259) unequivocally established the type species of *Bolboceras* Kirby as *Scarabaeus mobilicornis* Fabricius (by subsequent designation).

In summary, Krell et al. do not demonstrate stability or universality in the usage of *Odonteus* Samouelle. Their proposal to the Commission to designate *Scarabaeus quadridens* Fabricius, 1781 as the type species for *Bolboceras* Kirby further destabilizes usage because the type species has already been clearly designated (*Scarabaeus mobilicornis* Fabricius, 1775). Their proposal for precedence of *Odonteus* Samouelle over *Bolboceras* Kirby further confounds nomenclatural stability because of confusion with the junior homonym, *Odonteus* Agassiz, 1835, and the name *Odontaeus* Dejean. Nomenclatural stability and universality would be achieved by conserving the usage of *Bolboceras* Kirby, a name that has been prevalent for over 180 years. We stick by the proposals made to the Commission in our application.

## Additional references

- Blot, J. 1988. La representation schématique des relations existant entre le squelette axial et la squelette interne des nageoires impaires chez un grand nombre de Téléostéens (formule Blot), premet de rectifier une erreur de determination et de mettre un evidence la croissance allométrique des rayons épineux des nageoires impaires dans l'espèce Acanthonemus subaureus (de Blainville) de l'Eocène inférieur de Bolca (Italie du Nord). Compte Rendu de l'Academie des Sciences, Paris, sér. II, 307: 1131–1136.
- Lacordaire, J.T. 1856. *Histoire Naturelle des Insectes*. Genera des Coléoptères, vol. 3. 594 pp. Librairie Encyclopédique de Roret, Paris.
- Schaeffer, C. 1906. On *Bradycinetus* and *Bolboceras* of North America, with notes on other Scarabaeidae. *Transactions of the American Entomological Society*, **32**: 249–260.

Comments on the proposed conservation of *Lius* Deyrolle, 1865 (Insecta, Coleoptera) (Case 3194; see BZN 60: 132–134)

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I support this application.